GE 105 – INTRODUCTION TO ENGINEERING DESIGN

Timetable Guideline for Lectures and Studios (Summer Semester 1437/1438 H – 2017)

wk	*Lecture (50 min.)*	*Studio (1 hr - 50 min.)*	*Tutorial (50 min.)*	*Teams' responsibility Next Studio*
1	**1. Course Introduction**	Course ground rules and guide to effective meetings	Practicing preparing agendas and meeting minutes (theme: initial topic selection)	Team formation (five each) and final projects selection (suggest more than one topic)
	2. An Overview of Engineering Design	Tips for a good presentation	Evaluation of selected projects (peer review)	First presentation (selected topic for final project)
2	**3. The Engineering Profession**	Tips for writing reports (outline for GE105 final report)	First oral presentation	Written proposal for final project topic (one page)
	4. Engineering functional jobs	Project Planning and Literature Review	Make a Plan for Final Project + peer review of topic and plan	
3	**5. Need Analysis and problem definition**	Design cycle, cycle worksheet + need analysis key questions	Perform need analysis for each project	Written need analysis (one page) for each team
	6. Human Factors	Videos (human factors) and Discussion of videos	Identify human factors applicable to each group's project	Written human factors (one page) for each team
4	**7. Problem Formulation**	Practicing on team projects		2nd oral presentation: (formulation: need analysis, constraints, criteria, human factors) 10 min. each group
	8. Creativity : Thinking Outside the box	Second oral presentation (problem formulation)		Written assessment of progress of the final project (one page)
5	**9. Creativity in Engineering Design**	Creativity real-life examples	Practicing brainstorming to generate creative ideas for each project	Initial creative design of final poster (A0 hard paper)
	10. Concept generation and Design evaluation	How to make posters + Generate concepts for each project and practice weights and rates		3rd presentation (10 min.): problem formulation, human factors, concept generation, weights/rates
6	**11. Intellectual Property – Legal Factors**	Third oral presentation	Peer evaluation of presentation + voting for best poster design/content	
	12. Engineering Ethics	Real Eng. ethics case studies + Assessment of cases		
7	**Project Presentation (Exam)**			
	Final Exam **Tuesday, Aug. 22, 2017 @ 1 PM**			

Grading: Final exam (40%), Classwork (15%), tutorial (10%), Project (report: 10%, presentation: 15%, poster: 5%, logbook: 5%)